



In the October 9, 2009 issue of the Water Quality update:

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### **Well Status Report**

- Well 8 is currently off-line and out of service for the winter. The unit was taken out of service on September 9<sup>th</sup>. The well pumped about 43 million gallons of water during the summer months.
- Other seasonal wells are gradually being taken out of service for the winter. Wells 6 and 17 were shut down on September 29 while Wells 27 and 28 were removed from service earlier this week. Well 23 is expected to be shut down later this month.
- Well 7 is currently out of service. The well is expected to remain off-line for three to four weeks while repairs are made to the booster pump.

### **Water Quality Test Results – August & September 2009**

**MICROBIOLOGY** – In August and September, Water Utility staff collected 817 water samples from Water Utility facilities and representative sample locations in the distribution system. The samples were tested for coliform bacteria – indicators of potential water contamination. A single sample tested positive for coliform bacteria; however, follow-up samples did not confirm the original result. None of the other 816 samples collected in August and September showed the presence of coliform bacteria.

**IRON & MANGANESE** – The Water Utility also collected samples from eleven wells in August and fourteen wells in September. The samples were tested for manganese and iron. At elevated levels, these minerals can cause yellow, orange, or brown colored water. Monthly water samples are typically collected from wells that exceed 0.15 ppm iron or 25 ppb manganese. Test results are shown in the table below. NOTE: September results for Unit Wells 6, 19, 26, 27, 28, & 30 are not yet available.

August	Mn (ppb)	Iron (ppm)
UW 6	0.9	0.007
UW 7	27	0.355
UW 8	47	0.559
UW 17	31	0.095
UW 19	37	0.204
UW 23	25	0.067
UW 24	28	0.211
UW 26	5.6	0.011
UW 27	28	0.153
UW 28	22	0.190
UW 30	14	0.203

September	Mn (ppb)	Iron (ppm)
UW 8	48	0.552
UW 11	0.9	0.006
UW 13	12	0.055
UW 15	6.0	0.013
UW 17	28	0.106
UW 23	28	0.086
UW 24	29	0.195
UW 25	8.2	0.070

RESIDENTIAL IRON & MANGANESE – Tap samples were collected from nineteen homes in the Well 8 service area during August. Manganese ranged from 6.3–101 parts per billion (ppb) with a median of 37 ppb. Iron ranged from 0.01–1.49 parts per million (ppm) with a median of 0.50 ppm. Concentrations observed at the residential tap reflect the higher iron and manganese levels seen at Well 8.

Forty-three samples were collected in the Well 8 area in September; however, many of the test results are not yet available. They will be reported in the next Drinking Water Quality update. In addition, eight samples were collected in the Well 29 service area. Test results are also not available. Sample locations represent a subset of homes sampled as part of a study to confirm that satisfactory iron and manganese levels are being observed at the residential tap for homes served by Well 29 after filtration.

VOLATILE ORGANICS MONITORING – The previous update provided [year-to-date results](#) for volatile organic compounds (VOC) monitoring. Two additional samples were collected in August and tested for 40+ compounds. The table below only shows the levels for compounds that were detected.

VOLATILE ORGANIC COMPOUNDS	MCL	UNITS	8	23
<b>Bromodichloromethane*</b>	--	ppb	[0.61] <sup>1</sup>	<0.21
<b>Bromoform*</b>	--	ppb	<0.14	[0.33]
<b>Chloroform*</b>	--	ppb	1.4	[0.17]
<b>Dibromochloromethane*</b>	--	ppb	[0.35]	0.53
<b>1,2-Dichloroethylene (cis)</b>	70	ppb	[0.17]	<0.10

\* Disinfection By-Product

<sup>1</sup> Bracketed numbers indicate that the contaminant was detected but measured below the Level of Quantification (LOQ)

DISINFECTION BY-PRODUCTS – Annual samples are collected from representative locations within the distribution system and tested for disinfection by-products (DBP). These chemicals form when chlorine combines with the impurities in groundwater. The formation of DBPs is controlled by the amount of available organic matter, chlorine dose, temperature, and reaction time. Because little organic matter is present in groundwater, the level of DBPs in Madison drinking water is also very low. Results are contained in the following table.

DISINFECTION BY-PRODUCTS	MCL	UNITS	HSR	128	HLGC	IEM	FS-5	MDS	LS
Bromodichloromethane	--	ppb	0.98	[0.22] <sup>1</sup>	0.83	1.5	0.83	<0.13	1.0
Bromoform	--	ppb	2.0	<0.21	[0.30]	1.1	1.1	<0.21	1.4
Chloroform	--	ppb	0.47	[0.17]	0.67	0.72	[0.32]	<0.12	0.58
Dibromochloromethane	--	ppb	2.2	[0.20]	0.74	1.8	1.6	<0.17	1.7
<b>Total Trihalomethanes (TTHM)</b>	<b>80</b>	<b>ppb</b>	<b>5.7</b>	<b>0.59</b>	<b>2.5</b>	<b>5.1</b>	<b>3.9</b>	<b>0.0</b>	<b>4.7</b>
Dibromoacetic acid	--	ppb	1.3	<0.14	<0.14	0.87	1.2	<0.14	1.0
Dichloroacetic acid	--	ppb	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44
Monobromoacetic acid	--	ppb	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Monochloroacetic acid	--	ppb	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47
Trichloroacetic acid	--	ppb	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
<b>Total Haloacetic Acid (HAA5)</b>	<b>60</b>	<b>ppb</b>	<b>1.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.87</b>	<b>1.2</b>	<b>0.0</b>	<b>1.0</b>

<sup>1</sup> Bracketed numbers indicate that the contaminant was detected but measured below the Level of Quantification (LOQ)

## Public Participation Process Update

In 2008, the Water Utility Board adopted a formal public participation process that will provide multiple opportunities for public input on proposed projects from inception to construction. The process is currently being used on each of the following capital improvement projects:

- Zone 4 Water Supply Augmentation – additional water supply and enhanced fire flow capacity for southeast Madison
- Arbor Hills Supplemental Fire Flow Supply – enhanced fire flow capacity for south Madison
- Near West Side Water Supply Augmentation – additional water supply for west Madison
- Well 8 Iron and Manganese Mitigation – water quality improvements for the Isthmus and Near East neighborhoods

Madison Water Utility is currently working with a different citizen advisory panel for each of these projects. Another citizen panel is expected to assemble for the East Isthmus Well project later this fall. Below is a brief update on each of the projects:

Pressure Zone 4 Supply Augmentation: The project was established by the Water Utility Board in March 2009. Utility Project Manager Dennis Cawley is preparing an alternatives evaluation report for the project. A Citizen Advisory Panel (CAP) meeting has been scheduled to discuss

the alternatives evaluation. The meeting will take place on Wednesday, October 21 at the Water Utility, 119 E. Olin Avenue.

Arbor Hills Supplemental Fire Flow Supply: This project was established by the Water Utility Board in June 2009. In September, the Water Utility Board accepted the recommendation to move forward with a pump station. A design consultant will be hired by the utility to develop preliminary pump station layouts and site selection criteria. Site selection and construction are expected to occur in 2010 with initial operation planned for 2011. Utility Principal Engineer Al Larson is the project manager.

Near West Side (Zone 7 and 8) Water Supply Augmentation: A [public meeting](#) will be held at Stephens Elementary School, 102 S. Rosa Road, on Thursday, October 15 at 7 pm. The purpose of the meeting is to discuss the need for the project and determine whether the project should be established. Water Utility Engineer Dennis Cawley will present the potential project and answer questions. The utility is still looking for interested citizens to participate in the Citizen Advisory Panel (CAP) for this project. Please contact the Utility at 266-4651 or [water@cityofmadison.com](mailto:water@cityofmadison.com) if you would like to get involved.

Well 8 Iron and Manganese Mitigation: The project was established by the Water Utility Board in June 2009. Based on comments received and the natural interaction with other east isthmus wells, this project is being incorporated into an East Side Water Supply project. The utility is preparing a federal grant application and a request for proposals for professional consultant services for a study to evaluate water supply and water quality issues on the east side. It is expected that the consultant will begin work on this project in early 2010.

East Isthmus Well: There is no progress to report on this project; however, it has been proposed to combine this project with the East Side Water Supply project and consultant RFP project that is being formulated. The project would re-examine the question of how a proposed well would interact with Wells 7 and 8 on Madison's east side.

Complete project descriptions can be found on our website at [www.madisonwater.org](http://www.madisonwater.org). Citizen advisory panels have already formed for several of these projects; however, it is not too late to get involved. Please contact the Utility at 266-4651 or [water@cityofmadison.com](mailto:water@cityofmadison.com) if you would like to participate.

### **System Changes on the Far East Side**

A public meeting was held October 8<sup>th</sup> to discuss the conversion of a portion of Pressure Zone 6 into Pressure Zone 3. Phase 1 of the conversion is scheduled for November 2<sup>nd</sup>. It will increase pressure by 15-25 psi in the N. Thompson Drive area between Commercial Avenue and Cottage Grove Road. The second phase of the conversion, planned for next spring, will impact homes between Cottage Grove Road and Buckeye Road. Additional information can be found on our [website](#) or by contacting Water Utility Principal Engineer Al Larson. Another public meeting will be scheduled before phase 2 of the conversion is implemented.

## **Subscribe to the Drinking Water Quality Listserv**

People who want to receive regular updates on Madison's drinking water quality can subscribe to this e-mail listserv at <https://my.cityofmadison.com/>.

Registration is simple and provides access to dozens of City of Madison e-mail lists including Drinking Water Quality (this one) and Water Main Flushing, as well as departmental messages from Metro Transit, City Parks, Public Health, and Police.

Once registered for a “My Account”, click on the check box for “Drinking Water Quality” under the Water Utility heading.

Please contact me if you need assistance.

Sincerely,  
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